

FAX TRANSMISSION**DATE:** February 23, 2010**PTO IDENTIFIER:** Application Number 10/593,036 Conf. #5742
Patent Number**Inventor:** Kenji SUZUKI et al.**MESSAGE TO:** US Patent and Trademark Office – Examiner H. Sayadian**FAX NUMBER:** 571-273-7779**FROM:** BIRCH, STEWART, KOLASCH & BIRCH, LLP

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PHONE: (703) 205-8000**Attorney Dkt. #:** 1592-0165PUS**PAGES (Including Cover Sheet):** 5**CONTENTS:** Attached are our proposed claim amendments (not for entry).

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Application No. 10/593,036

Docket No.: 1592-0165PUS1

PROPOSED CLAIM AMENDMENTS - NOT FOR ENTRY

1. (Currently Amended) An InP substrate for epitaxial growth, wherein, when haze is defined as a value calculated by dividing intensity of scattered light obtained when light is incident from a predetermined light source onto a surface of the InP substrate, by intensity of the incident light from the light source, the light source having a wavelength of 488 nm, every portion of an effectively used area measured by Surfscan 6220 exhibits a haze of not more than 1ppm, the InP substrate having a size of at least two inches; and wherein the InP substrate comprises ~~the haze is not more than 1 ppm all over an effectively used area of the InP substrate and an off-angle with respect to a plane direction [[is]] of 0.05 to 0.10°, wherein the effectively used area includes the surface area of the substrate, with the exception of the peripheral part including the chamfered part of the substrate.~~

2. (Cancelled)

3. (Cancelled)

4. (Previously Presented) The InP substrate as claimed in claim 1, wherein a dislocation density is not more than 1000/cm².

5. (Previously Presented) The InP substrate as claimed in claim 4, wherein the dislocation density is not more than 500/cm².

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6. (Previously Presented) A compound semiconductor substrate for epitaxial growth, comprising an InP substrate and at least one epitaxial layer on the InP substrate, wherein:

the InP substrate has an off-angle with respect to a plane direction of 0.05 to 0.10°,

the InP substrate has a haze of 0.5 to 0.8 ppm, and

the haze in a surface of the at least one epitaxial layer is not more than 1 ppm,

wherein haze is defined as a value calculated by dividing intensity of scattered light obtained when light is incident from a predetermined light source onto the surface of the at least one epitaxial layer or a surface of the InP substrate, by intensity of the incident light from the light source.

7. (Previously Presented) An InP substrate for epitaxial growth, wherein, when haze is defined as a value calculated by dividing intensity of scattered light obtained when light is incident from a predetermined light source onto a surface of the InP substrate, by intensity of the incident light from the light source,

the haze is not more than 1 ppm all over an effectively used area of the InP substrate, and

an off-angle with respect to a plane direction is 0.05 to 0.10°.

8. (New) A method to reduce haze on a surface of an epitaxial layer grown on an InP substrate, comprising:

epitaxially growing a semiconductor layer on the InP substrate according to claim 1.

9. (New) An InP substrate for epitaxial growth,

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wherein, when haze is defined as a value calculated by dividing intensity of scattered light obtained when light is incident from a predetermined light source onto a surface of the InP substrate, by intensity of the incident light from the light source, the light source having a wavelength of 488 nm, every portion of an effectively used area of the substrate exhibits a haze of not more than 1ppm;

wherein the InP substrate has a size of at least two inches, and comprises an off-angle with respect to a plane direction of 0.05 to 0.10°.

Partial translation of standard configuration specification
of Surfscan 6220 (revised)

page 1, item 3. ABOUT THIS DEVICE

This device is designed to perform a detection of the number or amount, the position, and the size of extraneous substances, particles, damages, and the like, on a mirror-polished bare silicon wafer or on a wafer on which a film is formed, by a laser scanning method. The obtained data can be displayed and analyzed by a database embedded in the main body of this device.

page 3, item 5. BASIC SPECIFICATION

• Wafer size applicable to this device

This device is compliant to SEMI and JEIDA standards.

• wafer diameter of 2-6 inches

Wafers of both orientation flat type and notch type are applicable.

[Partially Omitted]

• Wafer transfer system

[Partially Omitted]

(2-inch and 3-inch wafers are applicable by the device being attached with optional supplies of factory shipment)